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ABSTRACT

Elementary and secondary school teachers in 38 schools responded to a questionnaire asking them to indicate the extent to which they agreed or disagreed with 21 statements of educational beliefs. These statements concerned teacher control and discipline, basic subjects and skills emphasis, concern for students, and student participation. Six response options were available: strongly agree; moderately agree; mildly agree; mildly disagree; moderately disagree; and strongly disagree. Data were analyzed by level of schooling (elementary, middle/junior high, and high school) and by each school. Results were interpreted within the framework of whether these beliefs tended to be traditional or progressive. Among the major conclusions, which are summarized in this report, was that a consensus of shared views emerged in response to relatively few statements. Overall, teachers expressed moderate and mild agreement with most belief statements; teachers also agreed and disagreed to approximately the same extent with most of the belief statements. Teachers mildly and moderately agreed with both traditional and progressive belief statements, although traditional beliefs were endorsed a little stronger than progressive beliefs. Progressive statements provoked a slightly greater consensus of mild agreement than did traditional. Middle/junior high school teachers endorsed traditional beliefs more strongly than did other teachers. Teachers mildly agreed with statements of traditional beliefs about teacher control and basic skills and with progressive beliefs about student participation and welfare. A sample of the questionnaire is included, and resulting data from all schools is presented in tabular form. (JD)

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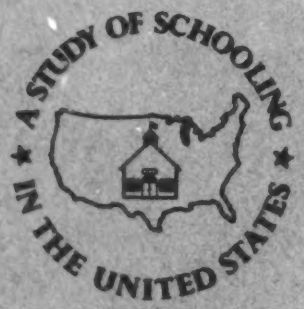

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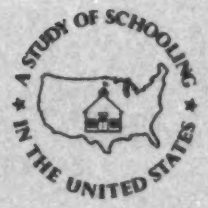

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TEACHERS' EDUCATIONAL BELIEFS

David P. Wright

Technical Report No. 14

1980

A Study of Schooling is based upon the assumption that improving schools requires knowing what is happening in and around them. A comprehensive data-base of contextual information was obtained from students, teachers, administrators, parents and observers at all grade levels in thirty-eight elementary and secondary purposively sampled schools. *It is strongly recommended that readers of any technical report in this series first read Technical Report No. 1 which outlines the details, scope and limitations of the Study as a whole.*

It must be understood that this series of technical reports does not constitute the Study. Some reports are highly specific "molecular" inquiries while others take a more "molar" view across data sources, schooling levels, etc. Some reports are more methodological in nature arising out of issues in data analysis. Many of the reports quite naturally overlap in data analysed and interpretations rendered. Some authors have approached their task as consisting mostly of data description with little discussion beyond the presentation of the data. Others have ventured further into the realm of interpretation and speculation. *It must be further understood that data-based inferences can and do differ among researchers who come at the data from differing points-of-view.* Authors, therefore, are duly acknowledged for each report and are responsible for the material presented therein.

TEACHERS' EDUCATIONAL BELIEFS

Teachers who completed the Teacher Survey were asked to "indicate the extent to which you agree or disagree with" twenty one statements of educational beliefs. Exhibit 1 displays the Educational Beliefs Scale as it appeared in the questionnaire.[1] For each statement, teachers checked one of six response options, which have been coded to form the following scale.

Chart 1

Response Options	Coded Values
Strongly Agree	6
Moderately Agree	5
Mildly Agree	4
Mildly Disagree	3
Moderately Disagree	2
Strongly Disagree	1

Table 1 shows the average response of teachers to each item of the Educational Beliefs Scale. The table presents the means for elementary, middle and high school teachers separately, as well as the means, standard deviations, response distributions and "Ns" for the three levels combined. Although the questionnaire provided six discrete response options, mean scores form a continuum, so their values must be interpreted in terms of the following ranges.

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1. See Technical Report No. 4, by Kenneth A. Sirotnik, for a discussion of the origin and development of the Educational Beliefs Scales.

Chart 2

Ranges of Mean Scores	Strength of Agreement
5.50 - 6.00	Strongly Agree
5.00 - 5.50	Moderately Agree (tends toward Strongly Agree)
4.50 - 5.00	Moderately Agree (tends toward Mildly Agree)
4.00 - 4.50	Mildly Agree (tends toward Moderately Agree)
3.50 - 4.00	Mildly Agree (tends toward neutrality)
3.00 - 3.50	Mildly Disagree (tends toward neutrality)
2.50 - 3.00	Mildly Disagree (tends toward Moderately Disagree)
2.00 - 2.50	Moderately Disagree (tends toward Mildly Disagree)
1.50 - 2.00	Moderately Disagree (tends toward Strongly Disagree)
1.00 - 1.50	Strongly Disagree

The response distributions and standard deviations in Table 1 show that variability strongly characterized the teachers' responses to many statements. This variability was particularly pronounced for items 3, 5, 6, 17, 20 and 21. On many issues, then, a wide range of beliefs existed in the group of teachers. In other words, a consensus of shared beliefs emerged in response to relatively few statements. It is interesting that expressions of strong agreement were shared more often than any other response option. More than half the teachers "strongly agreed" with three statements (items 1, 4 and 7). In no other instances did half the teachers select the same response option. The relative absence of consensus is another reflection of the strong variability among teachers in their responses to most of the belief statements.

As a measure of central tendency, the mean response to an item indexes the degree to which teachers (as a group) endorse the belief statement. The twenty one statements are listed from highest to lowest overall means in Exhibit 2. The items are also grouped according to the intervals or ranges in Chart 2 (above). Three conclusions are suggested by Exhibit 2. First, most of the statements elicited overall agreement, instead of overall disagreement, from the group of teachers. Second, the overall sample of teachers did not strongly agree or strongly disagree with any statements. Third, the largest numbers of statements elicited moderate and mild agreement from the teacher group. The absence of

items in the "strongly agree" and "strongly disagree" categories stems from the use of mean scores (measures of central tendency) to classify the statements in Exhibit 2. We have already seen that strong agreement with at least three statements was shared by more than half the teachers, so it would be incorrect to conclude from Exhibit 2 that the teacher group did not express any strong beliefs.

Exhibit 2 is based on the average responses of teachers in the entire sample. I prepared similar charts for the mean replies of elementary, middle and high school teachers, and found that the seven-set classification of items in Exhibit 2 did not change substantially (which is why the level-specific exhibits do not appear here). This finding suggests that the three groups of teachers agreed and disagreed to approximately the same extent with the same belief statements.

To understand the substance of the teachers' beliefs, it is necessary to look for patterns in their responses to substantively related statements. Two frameworks for classifying the items substantively have been conceived. I divided the statements into two sets: traditional and progressive beliefs. Sirotnik subdivided these sets into four clusters that are conceptually cohesive and statistically related. In the following pages, the teachers' beliefs will be interpreted, in turn, according to these two frameworks.

Traditional and Progressive Beliefs. A factor analysis of the responses of all teachers to the Educational Beliefs Scale showed that two factors accounted for 33% of the total variance in all twenty one items. Exhibit 3 shows the factor loadings from this analysis. The coefficients in Exhibit 3 represent the proportion of variance in item responses that can be attributed to variance in the underlying factor. The higher the coefficient, the more an item "taps" or "loads on" the factor. Exhibit 3 has been arranged so the items in each set appear in order of diminishing coefficients. An examination of the two sets of items shows clearly that traditional and progressive belief systems are the underlying factors. By regarding the respective sets of items as subscales, we create two variables that are more fundamental than the individual items of the scale. Subscale scores have been computed by calculating each teacher's average response to the items in the set, with two exceptions. First, Items 2 and 3 were dropped from the subscales because they did not strongly tap either the traditional or progressive factors.[2]

2. Indeed, an analysis of the internal consistency of teachers responses to the items in each set (in Table 2) shows that deleting these (and only these) two items slightly increased the reliability of the respective subscale scores.

The second exception was that subscale scores were not computed for teachers who answered fewer than half the items in the set.

Teachers' educational beliefs have been extensively studied in recent years. Although this paper is not the place to review previous research, one earlier finding must be mentioned here. Kerlinger found that traditional and progressive beliefs do not represent opposite ends of a philosophical continuum in the minds of many teachers. Instead, the two ideologies appear to be largely independent of each other. Furthermore, Kerlinger's studies showed that many teachers endorse traditional and progressive beliefs at the same time (which supports the suspicion that relatively few teachers have worked out internally consistent philosophies of education for themselves).

In the present study, the responses of teachers to the Educational Beliefs Scale resembled Kerlinger's findings. Table 3 shows the distribution of teachers' subscale scores for traditional and progressive beliefs, respectively. The table displays the absolute numbers (N) and percentages of teachers overall and by level whose subscale scores fell into each interval of Chart 2.[3] The shapes of these distributions are highlighted in Figures 1-3. The first two figures represent the percentage distributions of traditional and progressive subscale scores, respectively, among elementary, middle and high school teachers. Figure 3 plots the overall distribution of scores for the two subscales.

Three patterns can be discerned in Table 3 and Figures 1-3. First, the negative skew in the distributions is reflected by the fact that all eight curves peak to the right of the scale midpoint (3.50 = neutrality). This finding suggests that at all three levels of schooling, the largest numbers of teachers mildly and moderately agreed with statements of traditional and progressive beliefs at the same time. Second, the teachers' subscale scores for traditional beliefs are skewed slightly more than their scores for progressive beliefs. As a group, then, they endorsed the traditional belief items a little more consistently than the progressive items. Finally, subscale scores for traditional beliefs form a somewhat flatter distribution than the progressive scores. This signifies that statements of traditional beliefs elicited a slightly wider range of responses, while statements of progressive beliefs provoked a greater consensus of mild agreement from a larger percentage of teachers.

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3. Teachers whose subscale scores fell on a borderline between two intervals (e.g. 4.50) were divided equally between the adjacent intervals.

Within individual schools, the means, standard deviations and "Ns" for teachers' traditional and progressive subscale scores are shown in Table 4. Table 5, in turn, presents aggregated subscale statistics for the three levels of schooling separately, and for the three levels combined ("overall"). The aggregated findings in Table 5 suggest that middle school teachers endorsed traditional beliefs more strongly than elementary or high school teachers did. Elementary teachers, on the other hand, agreed with progressive beliefs much more consistently than their secondary counterparts. Indeed, only the elementary teachers endorsed the progressive statements more consistently than they endorsed the traditional beliefs. The two larger groups of secondary teachers agreed with traditional statements more strongly than with progressive statements.

The last analysis of teachers' traditional and progressive beliefs is to examine the mean subscale scores of schools in each triple, using Figures 4 and 5. The magnitudes of school subscale scores are measured along the left side of each figure. Within the figures, straight lines connect the mean scores of the schools in each triple, enabling the reader to discern patterns in the teachers' educational beliefs within and across triples. Figures 4 and 5 highlight the limited range (3.95 - 4.80) in which nearly all school-wide subscale scores occurred. Profiles show that most of the triples reflected a standard pattern in which middle schools harbored the most traditional beliefs and elementary schools featured the most progressive beliefs. Relatively few triples departed substantially from these patters; see Laurel in Figure 4 and Palisades and Manchester in Figure 5.

Four Subscales of Educational Beliefs. The formulation of traditional and progressive subscales within the Educational Beliefs Scale was based on a two-factor analysis of teachers' responses to the scale. A second factor analysis showed that four factors accounted for 42% of the overall variance in the same responses. On the basis of this breakdown and an internal consistency analysis, Sirotnik conceived four subscales, which appear in Exhibit 4. (The derivation of these subscales in explained in his Research Memorandum RS#2). Sirotnik deleted four items from his subscales (#2, 3, 9 and 14) because of substantive or factorial ambiguity, and computed four subscale scores for each teacher.

A comparison of Exhibits 3 and 4 reveals the close substantive relationship between the two sets of subscales. The traditional beliefs subscale is essentially a combination of the first two subscales in Exhibit 4. Moreover, the third and fourth subscales in Exhibit 4 largely comprise the progressive beliefs subscale.[4] Actually, this relationship reflects nothing more than four artifacts of the Educational Beliefs Scale itself. First, all of the scale's statements of traditional beliefs related to teacher control and basic skills. Second, all but one (#5) of the statements of progressive beliefs regarded student participation and teacher concern for student welfare. Third, nine of the ten statements about teacher control and basic skills expressed traditional beliefs about these issues. Finally, all of the items about pupil participation and welfare reflected progressive beliefs about these topics. An improved scale would distribute the two philosophical orientations more systematically among various topics and issues. As it is, existing data reflect teachers' traditional beliefs about classroom control and basic skills, and their progressive beliefs about student participation and welfare.

Table 6 shows the distributions of teachers' scores on the four subscales. It displays the numbers and percentages of teachers whose subscale scores reflected each category in Chart 2 above.[5] Figures 6-10, moreover, plot the percentage distributions of Table 6. The first four plots show the distributions of high, middle and elementary school teachers on the four subscales, respectively. Figure 10 displays the overall distributions of scores on the four subscales.

Table 6 and Figures 6-10 reflect several patterns in teachers' educational beliefs. First, all sixteen curves peak to the right of the midpoint, as was the case in Figures 1-3, which signifies that the overall teacher group did not disagree with any cohesive set of belief statements. Second, distributions of scores for three of the subscales were skewed to approximately the same extent. Replies to the two items of the Student Concern Subscale were substantially more skewed than the other three sets of responses. In fact, the largest percentages of all three groups of teachers selected the "strongly agree" response to this brief subscale. Were it not for teachers' replies to the two student welfare items,

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4. The only exception to this pattern is Item #5, which is included in the progressive beliefs subscale in Exhibit 3 and the Teacher Discipline & Control subscale of Exhibit 4, because it expresses a progressive belief about teacher discipline and control.

5. These intervals are replaced by discrete values in the case of Student Concern subscale scores. That subscale included two items, so it was mathematically impossible to obtain scores between the extremes of the intervals.

the distribution of scores on the progressive beliefs subscale would have been even less skewed than it was. Third, the Emphasis on Basics and Student Participation subscales yielded slightly flatter distributions than the Student Concern or Teacher Control subscales. Somewhat greater variability characterized the first two sets of responses, whereas the teachers expressed a slightly stronger consensus of mild agreement with the two latter subscales.

School scores for the four subscales appear in Tables 7-9, which show statistics for high schools, junior high schools and elementary schools, respectively. Aggregated statistics for the three levels and for all teachers are in Table 10. An examination of the overall means in Table 10 shows that teachers' responses to the four subscales varied considerably; they agreed with some sets of statements more strongly than with other sets. Chart 3 lists the four subscales according to the magnitudes of their overall means. Similar listings for the average replies of elementary, middle and high school teachers (not displayed) showed that, with one minor exception, the four subscales appeared in the same sequence, and fell into the same categories as they do in Chart 3 below.[6] The three groups of teachers, then agreed to approximately the same extent with each set of belief statements.

Chart 3

Rank	Subscales	Subscale Means	Strength of Agreement
1	Student Concern	5.25	Moderately Agree (tends to Strongly Agree)
2	Teacher Control	4.44	Mildly Agree (tends to Moderately Agree)
3	Emphasis on Basics	4.11	Mildly Agree (tends tc Moderately Agree)
4	Student Participation	3.84	Mildly Agree (tends to neutrality)

Finally, Figures 11-14 plot the mean subscale scores of the schools in each triple. The scales along the left side of each figure reflect the ranges within which school scores fell for each subscale. The lower limit of school scores for the Student Concern Subscale (Figure 13) roughly coincides with the upper limits for the three other subscales (Figures 11, 12 & 14). Within Figure 13, three distinct

6. Indeed, all differences between means for the three teacher groups appear too small to be statistically significant, even if schools had been randomly selected for participation in the study.

patterns can be discerned in the profiles. In one group of triples (Dennison*, Palisades, Newport, Woodlake, Rosemont and Bradford), elementary teachers agreed more strongly with the two Student Concern statements than middle school teachers, who agreed more consistently than high school teachers. In the second group (Atwater, Manchester and Euclid), the strongest agreement with the same statements was registered by middle school teachers. In the third group (Crestview, Vista, Fairfield and Laurel), the middle school teachers expressed the weakest agreement with the same statements.

Turning to Figure 11 which plots school scores on the Teacher Control subscale, the predominant pattern shows strongest agreement by middle school teachers (Laurel and Palisades are the only exceptions). Figure , the Emphasis on Basic Skills subscale, exhibits no consistent pattern of profiles, but three patterns can be observed in Figure 14, Student Participation. In Dennison, Rosemont and Laurel, agreement was strongest in elementary schools, and weakest in high schools. In Palisades and Manchester, agreement by middle school teachers was stronger than by elementary or high school teachers. In the largest number of triples, however, agreement with student participation statements was weakest among middle school teachers (Newport, Crestview, Bradford, Vista, Euclid, Atwater, Fairfield and Woodlake).

Two conclusions emerge from this summary of Figures 11-14. First, patterns in school scores within triples depended largely on the substance of the subscales, as one would expect. Particular triples, in other words, exhibited different profiles in relation to different subscales. Second, unlike the cases of progressive and traditional beliefs, only one of the four subscales yielded a pattern that characterized as many as eight of the triples. Three of the subscales yielded much less consistent patterns from triple to triple. As a result, one can not easily generalize about patterns in the beliefs of elementary, middle and high school teachers regarding Concern for Students, Emphasis on Basics or Teacher Control. The most consistent generalization is that middle school teachers in most triples agreed less than their elementary and high school counterparts with belief statements about student participation.

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* Names of schools and districts in this report are fictitious.

Summary. Several major conclusions have emerged from the teachers' replies to the Educational Beliefs Scale, and are summarized below.

(1) Teachers expressed a wide range of beliefs about many educational issues. A consensus of shared views emerged in response to relatively few statements.

(2) Strong agreement was widely shared more often than mild agreement, mild disagreement, or strong disagreement. When consensus did occur, it took the form of firm affirmation of belief statements.

(3) Overall, the group of teachers expressed moderate and mild agreement with most belief statements. They mildly and moderately disagreed with few statements. In no case did the mean response reflect strong agreement or disagreement.

(4) Elementary, middle and high school teachers agreed and disagreed to approximately the same extent with most of the belief statements.

(5) At all three levels of schooling, the largest numbers of teachers mildly and moderately agreed with traditional and progressive belief statements at the same time.

(6) Overall, teachers endorsed traditional beliefs a little stronger than progressive beliefs.

(7) Progressive statements provoked a slightly greater consensus of mild agreement than did traditional statements, which yielded slightly more variability.

(8) Middle school teachers endorsed traditional beliefs more strongly than their counterparts in elementary or high schools. Only the elementary teachers agreed more with progressive statements than with traditional statements. These patterns characterized the schools in all but three triples.

(9) Overall, the teachers moderately or mildly agreed with statements of traditional beliefs about teacher control and basic skills, and with progressive beliefs about student participation and welfare.

(10) The group of teachers endorsed two statements of progressive beliefs about student welfare more consistently than three other sets of belief statements.

(11) Progressive statements about student welfare and traditional statements about teacher control yielded slightly more group consensus than did progressive statements about student participation or basic skills.

(12) At the three separate levels of schooling, teachers agreed and disagreed to approximately the same extent with statements of traditional beliefs about teacher control and basic skills, and progressive beliefs about student participation and welfare.

(13) In most triples, middle school teachers agreed less than their elementary or high school counterparts with progressive statements about student participation. Within triples, few other patterns emerged consistently in the replies to traditional beliefs about teacher control or basic skills, or to progressive statements about student participation.

The educational beliefs of teachers have (to my knowledge) not previously been examined in the context of a general study of schooling. In the weeks ahead, teachers' responses to the Educational Beliefs Scale should be analyzed in several additional ways. They should be correlated with related items of belief, attitude, perception and practice, and with classroom observation data, school climate data and sociometric findings. Through relational analyses like these, we may begin to understand some of the underlying factors, not to mention some of the ramifications, of teachers' educational beliefs.

Exhibit 1

The Educational Beliefs Scale

C. Please indicate the extent to which you agree or disagree with each of the following statements.
(Mark only one circle for each statement)

	Strongly Agree	Moderately Agree	Mildly Agree	Mildly Disagree	Moderately Disagree	Strongly Disagree
1. Good teacher-student relations are enhanced when it is clear that the teacher, not the students, is in charge of classroom activities	○	○	○	○	○	○
2. As long as they have control over teaching in their own classrooms, it is not necessary for teachers to have a voice in school administrative affairs	○	○	○	○	○	○
3. The learning of basic facts is less important in schooling than acquiring the ability to synthesize facts and ideas into a broader perspective	○	○	○	○	○	○
4. Learning is enhanced when teachers praise generously the accomplishments of individual students	○	○	○	○	○	○
5. There is too great an emphasis on keeping order in most classrooms	○	○	○	○	○	○
6. Learning is essentially a process of increasing one's store of information about the various basic fields of knowledge	○	○	○	○	○	○
7. The best learning atmosphere is created when the teacher takes an active interest in the problems and affairs of students	○	○	○	○	○	○
8. An orderly classroom is the major prerequisite to effective learning	○	○	○	○	○	○
9. Effective learning depends primarily upon the use of adequate instructional techniques and resources	○	○	○	○	○	○
10. Student initiation and participation in planning classroom activities are essential to the maintenance of an effective classroom atmosphere	○	○	○	○	○	○
11. Students must be kept busy or they soon get into trouble	○	○	○	○	○	○
12. When students are allowed to participate in the choice of activities, discipline problems are generally averted	○	○	○	○	○	○
13. When given a choice of activities, most students select what is best for them	○	○	○	○	○	○
14. In planning their work, teachers should rely heavily on the knowledge and skills students have acquired outside the classroom	○	○	○	○	○	○
15. Student motivation is greatest when students can gauge their own progress rather than depending on regular evaluation by the teacher	○	○	○	○	○	○
16. Students need and should have more supervision than they usually get	○	○	○	○	○	○
17. Before students are encouraged to exercise independent thought they should be thoroughly grounded in facts and knowledge about basic subjects	○	○	○	○	○	○
18. In the interest of good discipline, students who repeatedly disrupt the class must be firmly punished	○	○	○	○	○	○
19. The teaching of basic skills and subject matter is the most important function of the school	○	○	○	○	○	○
20. Proper control of a class is amply demonstrated when the students work quietly while the teacher is out of the room	○	○	○	○	○	○
21. Students are motivated to do better work when they feel free to move around the room while class is in session	○	○	○	○	○	○

Table 1

Teachers' Responses to Educational Beliefs Items

Educational Beliefs Questionnaire Items	Means for Highs	Means for Mids	Means for Elems	Three Levels Combined							
				Means	SDs	Distribution in Percents 6	5	4	3	2	1	N
1. Teacher control	5.24	5.44	4.98	5.24	1.13	58	23	12	4	2	2	1322
2. Teacher voice	2.38	2.34	2.22	2.33	1.38	3	6	8	23	22	38	1327
3. Ability to synthesize	4.07	3.94	3.66	3.94	1.68	24	21	15	17	11	12	1321
4. Teacher praise	5.20	5.31	5.42	5.28	0.97	54	27	14	3	1	1	1324
5. Emphasis on order	2.93	2.70	2.87	2.85	1.45	4	10	17	26	19	24	1314
6. Basic information	4.15	4.20	4.30	4.20	1.46	20	29	22	14	8	7	1323
7. Teacher interest	5.16	5.15	5.50	5.23	1.01	53	27	15	4	1	1	1324
8. Orderly classroom	4.56	4.71	4.56	4.61	1.37	33	27	21	10	6	3	1324
9. Teaching techniques	4.65	4.6.	4.64	4.64	1.19	27	32	26	9	4	2	1324
10. Student participation	4.22	4.18	4.53	4.27	1.30	21	23	31	15	8	3	1301
11. Keep students busy	4.23	4.66	4.58	4.43	1.28	24	26	21	14	4	3	1325
12. Student participation	4.12	4.12	4.34	4.17	1.29	16	26	31	17	6	4	1326
13. Student selections	3.29	3.12	3.47	3.28	1.32	5	15	23	30	17	10	1321
14. Prior knowledge	3.79	3.77	3.79	3.78	1.27	9	19	35	21	10	6	1323
15. Student motivation	4.10	4.12	4.26	4.14	1.33	17	26	27	19	7	4	1322
16. Student supervision	3.96	4.03	3.80	3.95	1.23	12	20	31	27	7	3	1320
17. Basic knowledge	4.04	3.97	3.56	3.92	1.51	18	22	23	20	10	9	1322
18. Student punishments	4.62	4.85	4.55	4.68	1.35	36	25	21	10	5	3	1316
19. Basic skills	4.17	4.26	4.24	4.21	1.34	18	28	27	17	5	5	1320
20. Classroom control	4.00	4.15	3.95	4.04	1.45	19	22	27	18	8	7	1323
21. Freedom & motivation	3.27	3.19	3.75	3.35	1.43	8	15	22	27	16	12	1321

Exhibit 2

Teachers' Educational Beliefs: Items Grouped by Mean Responses

	Overall Means
Set 1: Moderately Agree (tends toward Strongly Agree)	
4. Learning is enhanced when teachers praise generously the accomplishments of individual students.	5.28
1. Good teacher-student relations are enhanced when it is clear that the teacher, not the students, is in charge of classroom activities.	5.24
7. The best learning atmosphere is created when the teacher takes an active interest in the problems and affairs of students.	5.23
Set 2: Moderately Agree (tends toward Mildly Agree)	
18. In the interest of good discipline, students who repeatedly disrupt the class must be firmly punished.	4.68
9. Effective learning depends primarily upon the use of adequate instructional techniques and resources.	4.64
8. An orderly classroom is the major prerequisite to effective learning.	4.61
Set 3: Mildly Agree (tends toward Moderately Agree)	
11. Students must be kept busy or they soon get into trouble.	4.43
10. Student initiation and participation in planning classroom activities are essential to the maintenance of an effective classroom atmosphere.	4.27
19. The teaching of basic skills and subject matter is the most important function of the school.	4.21
6. Learning is essentially a process of increasing one's store of information about the various basic fields of knowledge.	4.20
12. When students are allowed to participate in the choice of activities, discipline problems are generally averted.	4.17
15. Student motivation is greatest when students can gauge their own progress rather than depending on regular evaluation by the teacher.	4.14
20. Proper control of a class is amply demonstrated when the students work quietly while the teacher is out of the room.	4.04

Exhibit 2 (Continued)

Set 4: Mildly Agree (tends toward neutrality)

16.	Students need and should have more supervision than they usually get.	3.95
3.	The learning of basic facts is less important in schooling than acquiring the ability to synthesize facts and ideas into a broad perspective.	3.94
17.	Before students are encouraged to exercise independent thought they should be thoroughly grounded in facts & knowledge about basic subjects.	3.92
14.	In planning their work, teachers should rely heavily on the knowledge and skills students have acquired outside the classroom.	3.78

Set 5: Mildly Disagree (tends toward neutrality)

21.	Students are motivated to do better work when they feel free to move around the room while class is in session.	3.35
13.	When given a choice of activities, most students select what is best for them.	3.28

Set 6: Mildly Disagree (tends toward Moderately Disagree)

5.	There is too great an emphasis on keeping order in most classrooms.	2.85

Set 7: Moderately Disagree (tends toward Mildly Disagree)

2.	As long as they have control over teaching in their own classrooms, it is not necessary for teachers to have a voice in school administrative affairs.	2.33

Exhibit 3

Two Factor Analysis: Traditional and Progressive Beliefs (N=1350)

Items from the Educational Beliefs Scale	Factor One	Factor Two
8. An orderly classroom is the major prerequisite to effective learning.	0.660	0.000
17. Before students are encouraged to exercise independent thoughts, they should be thoroughly grounded in facts and knowledge on basic subjects.	0.603	0.000
18. In the interest of good discipline, students who repeatedly disrupt the class must be firmly punished.	0.596	0.000
20. Proper control of a class is amply demonstrated when the students work quietly while the teacher is out of the room.	0.576	0.000
19. The teaching of basic skills and subject matter is the most important function of the school.	0.569	0.000
11. Students must be kept busy or they soon get into trouble.	0.565	0.000
6. Learning is essentially a process of increasing one's store of information about the various basic fields of knowledge.	0.540	0.000
1. Good teacher-student relations are enhanced when it is clear that the teacher, not the students, is in charge of classroom activities.	0.527	0.000
16. Students need and should have more supervision than they usually get.	0.490	0.000
9. Effective learning depends primarily upon the use of adequate instructional techniques and resources.	0.483	0.285
2. As long as they have control over teaching in their own classrooms, it is not necessary for teachers to have a voice in school administrative affairs.	0.000	0.000
10. Student initiation and participation in planning classroom activities are essential to the maintenance of an effective classroom atmosphere.	0.000	0.705
12. When students are allowed to participate in the choice of activities, discipline problems are generally averted.	0.000	0.692
13. When given a choice of activities, most students select what is best for them.	0.000	0.629
15. Student motivation is greatest when students can gauge their own progress rather than depending on regular evaluation by the teacher.	0.000	0.544
21. Students are motivated to do better work when they feel free to move around the room while class is in session.	0.000	0.514
14. In planning their work, teachers should rely heavily on the knowledge and skills students have acquired outside the classroom.	0.000	0.466
7. The best learning atmosphere is created when the teacher takes an active interest in the problems and affairs of students.	0.000	0.463
5. There is too great an emphasis on keeping order in most classrooms.	-0.329	0.364
4. Learning is enhanced when teachers praise generously the accomplishments of individual students.	0.000	0.290
3. The learning of basic facts is less important in schooling than acquiring the ability to synthesize facts and ideas into a broader perspective.	0.000	0.000

Table 2

Internal Consistency Analysis of Teacher Educational Beliefs Items:
Traditional Beliefs Subscale and Progressive Beliefs Subscale

		Overall		Highs		Mids		Elems	
	Item Numbers	Item-Total Corrected r	Alpha If Item Deleted	Item-Total Corrected r	Alpha If Item Deleted	Item-Total Corrected r	Alpha If Item Deleted	Item-Total Corrected r	Alpha If Item Deleted
Traditional Beliefs Subscale	1	.41	.73	.44	.76	.34	.68	.37	.72
	2	.18	.76	.21	.78	.15	.71	.13	.75
	6	.40	.73	.40	.76	.41	.67	.39	.72
	8	.48	.72	.50	.75	.38	.68	.53	.70
	9	.33	.74	.36	.77	.28	.69	.37	.72
	11	.40	.73	.39	.76	.40	.67	.48	.71
	16	.36	.74	.41	.76	.30	.69	.30	.73
	17	.48	.72	.51	.75	.44	.66	.48	.71
	18	.46	.72	.51	.75	.41	.67	.37	.72
	19	.45	.73	.49	.75	.36	.68	.43	.71
	20	.44	.73	.47	.75	.38	.68	.40	.72
	Overall Alpha		.75		.78		.70		.74
Progressive Beliefs Subscale	3	.17	.69	.11	.70	.22	.69	.31	.66
	4	.20	.67	.22	.66	.18	.68	.15	.68
	5	.29	.66	.29	.65	.31	.67	.26	.67
	7	.27	.66	.26	.65	.24	.67	.31	.66
	10	.45	.63	.42	.62	.46	.63	.46	.63
	12	.48	.62	.48	.61	.55	.62	.38	.64
	13	.44	.63	.49	.61	.38	.65	.40	.64
	14	.34	.65	.35	.64	.34	.66	.33	.65
	15	.39	.64	.35	.64	.40	.65	.46	.63
	21	.36	.64	.37	.63	.36	.66	.33	.65
	Overall Alpha		.67		.66		.68		.68

Table 3

Traditional and Progressive Beliefs:

Distributions of Subscale Scores Among Teachers

	Subscale Scores	Overall		Highs		Mids		Elems	
		N	%	N	%	N	%	N	%
Traditional Beliefs Subscale	5.50-6.00	74	5.6	32	4.9	27	6.9	16	5.7
	5.00-5.50	226	17.1	119	18.2	66	16.9	40	14.3
	4.50-5.00	335	25.3	156	23.8	112	28.6	67	24.0
	4.00-4.50	298	22.5	139	21.2	96	24.5	62	22.2
	3.50-4.00	230	17.4	117	17.9	59	15.1	54	19.4
	3.00-3.50	104	7.8	57	8.7	23	5.9	25	9.0
	2.50-3.00	41	3.1	24	3.7	7	1.8	10	3.6
	2.00-2.50	12	0.9	8	1.2	0	0.0	4	1.4
	1.50-2.00	4	0.1	2	0.3	1	0.3	1	0.4
	1.00-1.50	1	0.0	1	0.1	0	0.0	0	0.0
	Totals	1325	100.0	655	100.0	391	100.0	279	100.0
Progressive Beliefs Subscale	5.50-6.00	20	1.5	11	1.7	3	0.8	7	2.5
	5.00-5.50	97	7.3	32	4.9	27	6.9	36	12.9
	4,50-5.00	276	20.8	125	19.1	82	20.9	70	25.1
	4.00-4.50	420	31.7	221	33.7	112	28.6	87	31.2
	3.50-4.00	357	26.9	175	26.7	120	30.6	62	22.2
	3.00-3.50	122	9.2	77	11.8	34	8.7	10	3.6
	2.50-3.00	31	2.3	11	1.7	14	3.6	7	2.5
	2.00-2.50	2	0.0	2	0.3	0	0.0	0	0.0
	1.50-2.00	0	0.0	0	0.0	0	0.0	0	0.0
	1.00-1.50	1	0.0	1	0.2	0	0.0	0	0.0
	Totals	1326	100.0	655	100.0	392	100.0	279	100.0

Figures 1-3

Traditional and Progressive Beliefs:

Distributions of Subscale Scores Among Teachers

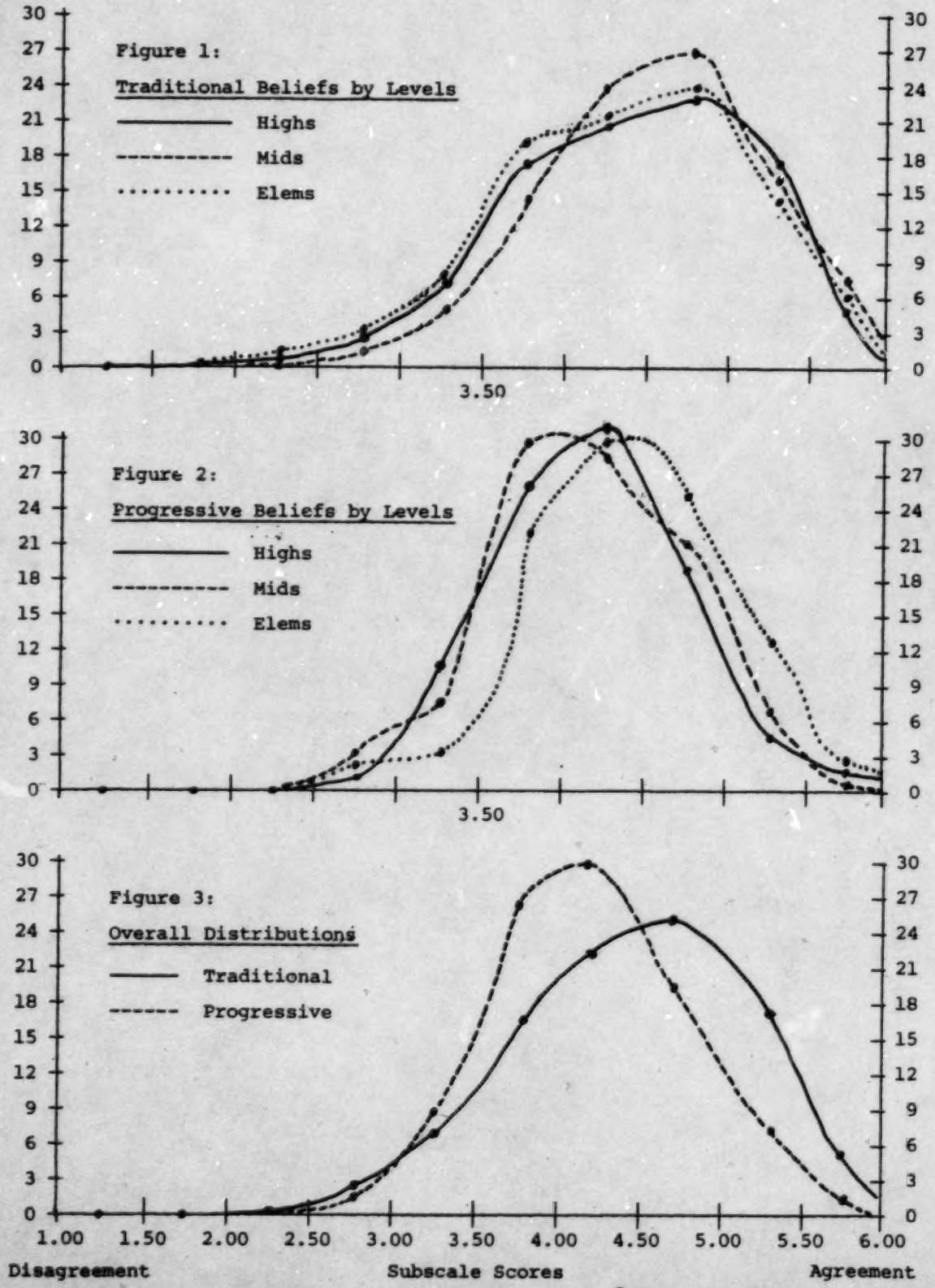


Table 4

Traditional and Progressive Beliefs:

Subscale Scores for Schools

	Triples	Highs			Mids			Elems		
		Mean	SD	N	Mean	SD	N	Mean	SD	N
Traditional Beliefs Subscale	Vista	4.22	.71	84	4.42	.65	48	4.23	.80	30
	Crestview	4.19	.73	44	4.52	.68	32	4.24	.75	29
	Fairfield	4.63	.77	44	4.61	.73	34	4.48	.88	34
	Rosemont	4.38	.91	110	4.57	.62	41	4.56	.79	28
	Newport	4.29	.82	76	4.35	.65	56	4.26	.47	25
	Woodlake	4.28	.66	53	4.28	.63	27	3.98	.51	23
	Atwater	4.05	.85	24	4.68	.66	22	4.67	.97	11
	Palisades	4.39	.76	58	4.44	.75	40	4.40	.87	17
	Laurel	4.78	.56	17	4.58	.63	21	4.49	.89	23
	Manchester	4.49	.82	66	4.77	.74	32	4.43	.90	14
	Bradford	4.45	.71	47	4.39	.76	27	4.09	.87	20
	Euclid	4.33	.68	22	4.41	.70	11	4.11	.62	21
	Dennison	4.49	.58	10	--	--	--	4.08	.98	4
	Totals	4.36	.78	655	4.49	.69	391	4.31	.79	279
Progressive Beliefs Subscale	Vista	4.10	.50	84	3.95	.54	48	4.29	.63	30
	Crestview	4.16	.60	44	4.03	.52	72	4.46	.71	29
	Fairfield	3.99	.68	44	3.95	.47	34	4.36	.70	34
	Rosemont	4.15	.51	110	4.30	.59	41	4.48	.66	28
	Newport	4.25	.73	76	4.18	.58	57	4.18	.54	25
	Woodlake	4.07	.52	53	3.99	.55	27	4.38	.59	23
	Atwater	3.98	.50	24	4.01	.60	22	4.24	.55	11
	Palisades	4.28	.62	58	4.60	.49	40	4.48	.62	17
	Laurel	3.97	.46	17	4.06	.61	21	4.64	.40	23
	Manchester	4.11	.71	66	4.25	.62	32	4.01	.70	14
	Bradford	4.14	.48	47	4.08	.71	27	4.37	.48	20
	Euclid	4.03	.60	22	4.02	.43	11	4.04	.44	21
	Dennison	4.51	.49	10	--	--	--	5.00	.09	4
	Totals	4.14	.59	655	4.14	.59	392	4.35	.61	279

Table 5

Traditional and Progressive Beliefs:

Subscale Scores for Levels and Overall

Traditional Beliefs Subscale

	Mean	SD	N
Highs	4.36	.78	655
Mids	4.49	.69	391
Elems	4.31	.79	279
Overall	4.39	.76	1325

Progressive Beliefs Subscale

	Mean	SD	N
Highs	4.14	.59	655
Mids	4.14	.59	392
Elems	4.35	.61	279
Overall	4.18	.60	1326

Figure 4

Traditional Beliefs Subscale of the Educational Beliefs Scale:

Mean Responses of Schools in Triples

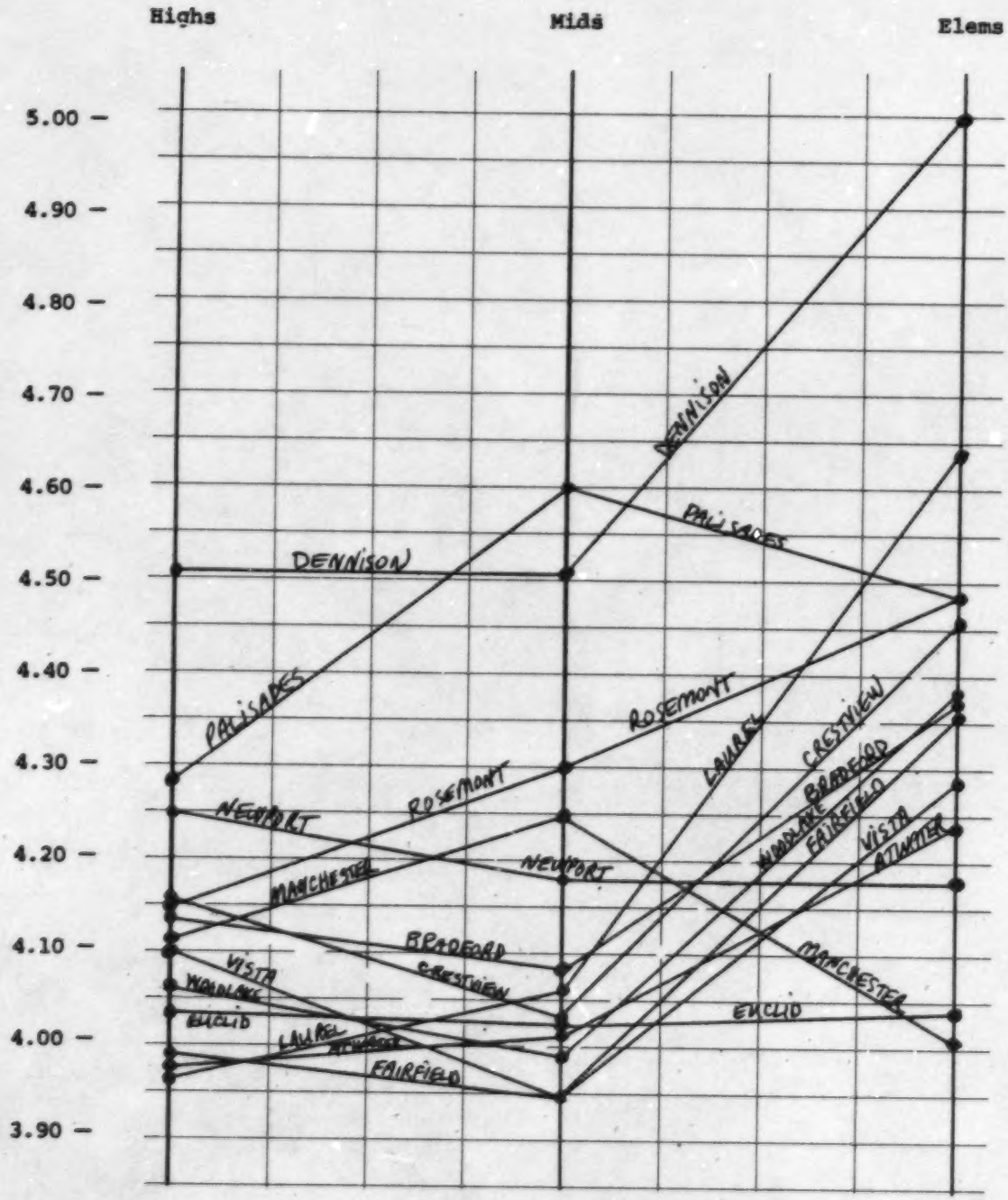


Figure 5

Progressive Beliefs Subscale of the Educational Beliefs Scale:

Mean Responses of Schools in Triples

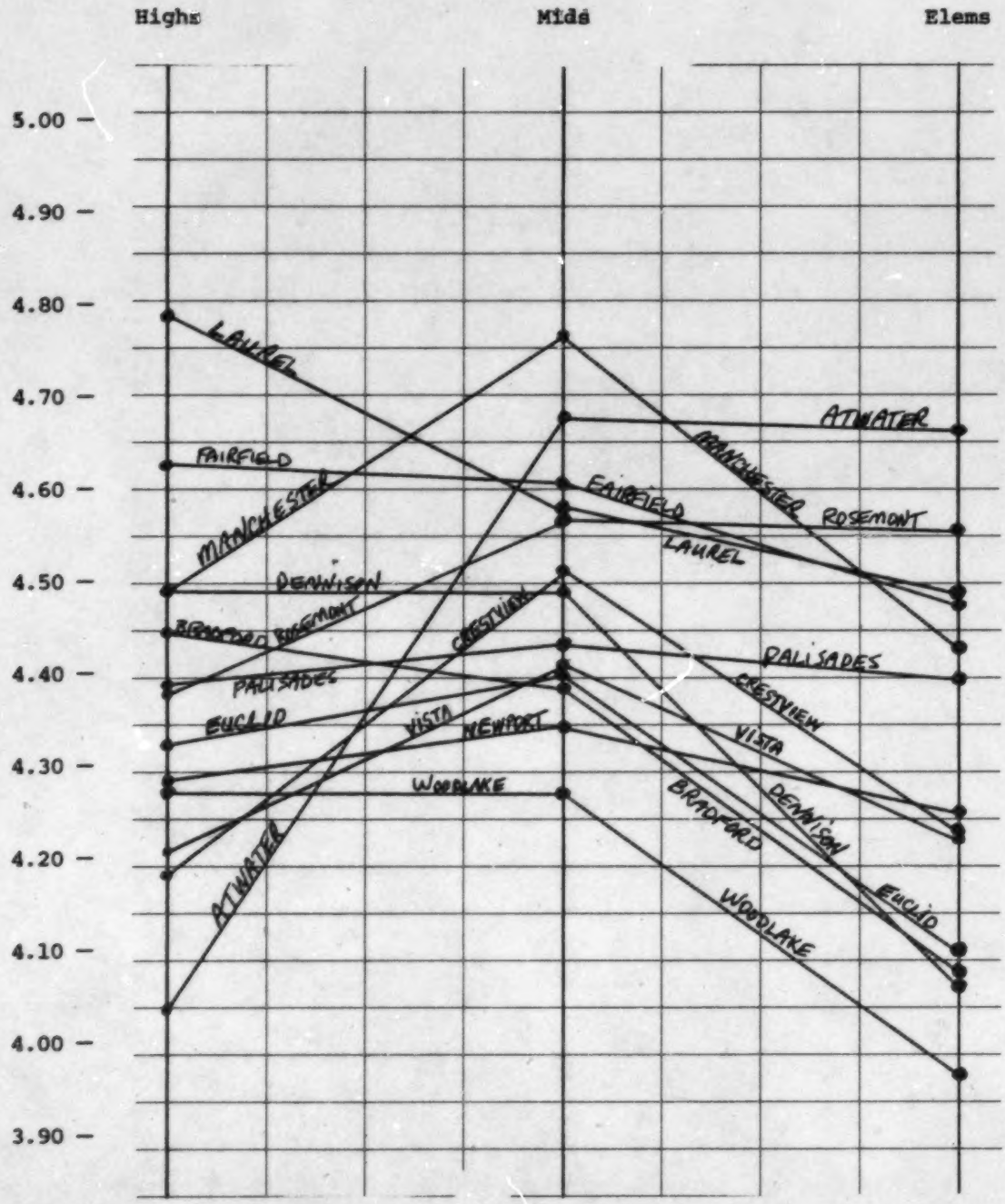


Exhibit 4

Four Subscales of Educational Beliefs

Subscale A: Teacher Discipline and Control

1. Good teacher-student relations are enhanced when it is clear that the teacher, not the students, is in charge of classroom activities.
5. There is too great an emphasis on keeping order in most classrooms.
8. An orderly classroom is the major prerequisite to effective learning.
11. Students must be kept busy or they soon get into trouble.
16. Students need and should have more supervision than they usually get.
18. In the interest of good discipline, students who repeatedly disrupt the class must be firmly punished.
20. Proper control of a class is amply demonstrated when the students work quietly while the teacher is out of the room.

Subscale B: Basic Subjects and Skills Emphasis

6. Learning is essentially a process of increasing one's store of information about the various basic fields of knowledge.
17. Before students are encouraged to exercise independent thoughts, they should be thoroughly grounded in facts and knowledge on basic subjects.
19. The teaching of basic skills and subject matter is the most important function of the school.

Subscale C: Concern for Students

4. Learning is enhanced when teachers praise generously the accomplishments of individual students.
7. The best learning atmosphere is created when the teacher takes an active interest in the problems and affairs of students.

Subscale D: Student Participation

10. Student initiation and participation in planning classroom activities are essential to the maintenance of an effective classroom atmosphere.
12. When students are allowed to participate in the choice of activities, discipline problems are generally averted.
13. When given a choice of activities, most students select what is best for them.
15. Student motivation is greatest when students can gauge their own progress rather than depending on regular evaluation by the teacher.
21. Students are motivated to do better work when they feel free to move around the room while class is in session.

Table 6

Distributions of Scores on Four Subscales of Educational Beliefs

	Subscale Scores	Overall		Highs		Mids		Elems	
		N	%	N	%	N	%	N	%
Subscale A: Teacher Control	5.50-6.00	105	7.9	44	6.7	40	10.2	21	7.5
	5.00-5.50	245	18.5	117	17.9	84	21.4	43	15.4
	4.50-5.00	304	22.9	147	22.4	95	24.2	64	22.9
	4.00-4.50	305	23.0	145	22.1	94	24.0	64	22.9
	3.50-4.00	210	15.8	112	17.1	50	12.8	49	17.5
	3.00-3.50	97	7.3	52	7.9	23	5.8	23	8.2
	2.50-3.00	43	3.2	25	3.8	6	1.5	11	3.9
	2.00-2.50	14	1.1	10	1.5	0	0.0	4	1.4
	1.50-2.00	4	0.3	3	0.5	0	0.0	1	0.4
	1.00-1.50	0	0.0	0	0.0	0	0.0	0	0.0
	Totals	1327	100.0	655	100.0	392	100.0	280	100.0
Subscale B: Basic Skills	5.50-6.00	113	8.5	55	8.4	37	9.5	21	7.5
	5.00-5.50	175	13.2	91	13.9	49	12.5	34	12.2
	4.50-5.00	215	16.2	111	16.9	59	15.1	46	16.5
	4.00-4.50	261	19.7	132	20.1	81	20.7	49	17.6
	3.50-4.00	200	15.1	96	14.6	64	16.4	39	14.0
	3.00-3.50	164	12.4	68	10.4	52	13.3	44	15.8
	2.50-3.00	98	7.4	51	7.8	24	6.1	24	8.6
	2.00-2.50	48	3.6	23	3.5	12	3.1	12	4.3
	1.50-2.00	31	2.3	15	2.3	9	2.3	7	2.5
	1.00-1.50	21	1.6	14	2.1	4	1.0	3	1.1
	Totals	1326	100.0	656	100.0	391	100.0	279	100.0

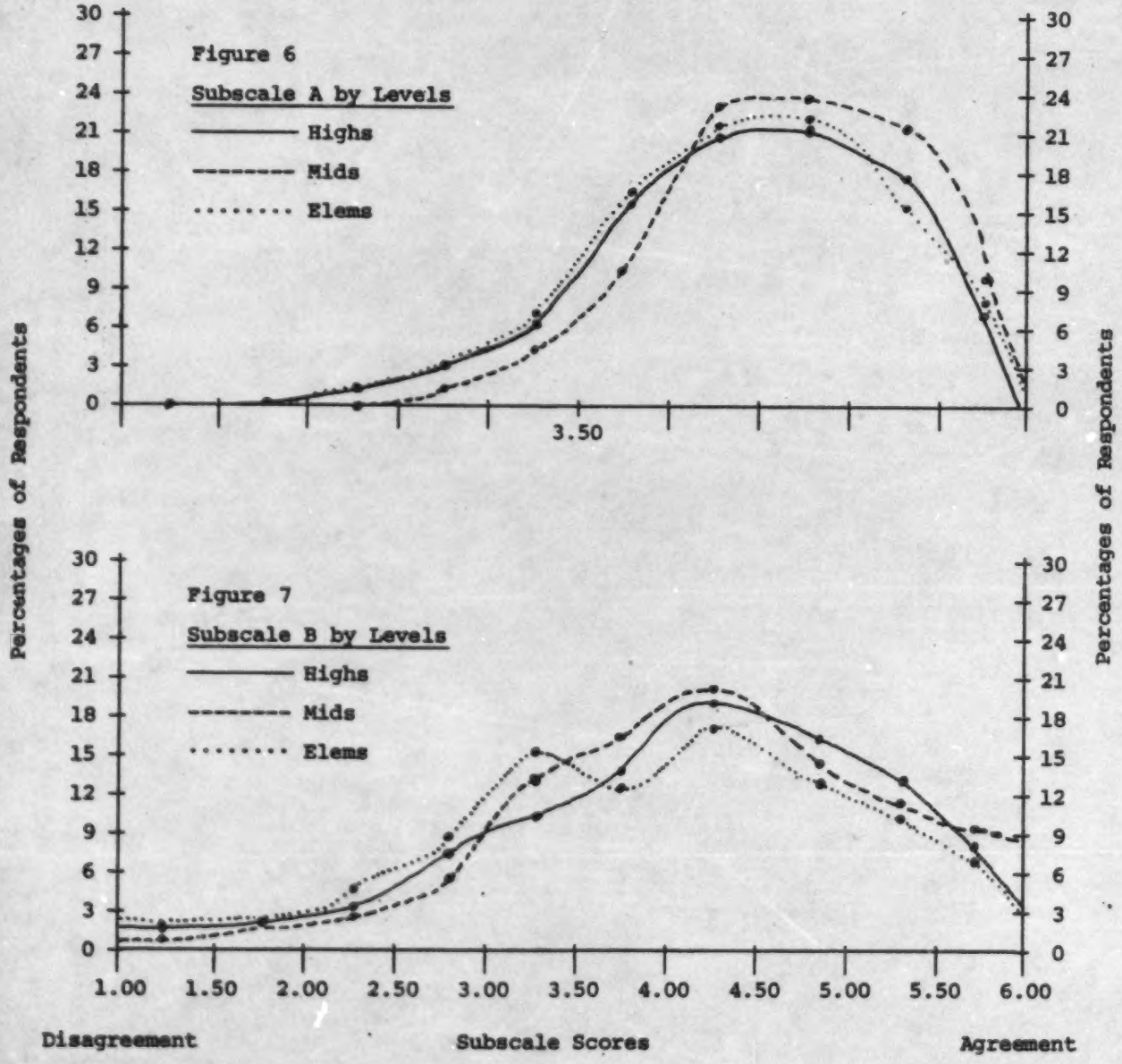
Table 6 (Continued)

Subscale C: Concern for Students	6.00	462	35.0	193	29.5	137	35.3	132	47.5
	5.50	316	23.9	157	24.0	81	20.9	78	28.1
	5.00	236	17.9	142	21.7	72	18.6	22	7.9
	4.50	142	10.8	74	11.3	47	12.1	21	7.6
	4.00	103	7.8	53	8.1	33	8.5	17	6.1
	3.50	37	2.8	23	3.5	10	2.6	4	1.4
	3.00	15	1.1	6	0.9	7	1.8	2	0.7
	2.50	6	0.5	4	0.6	1	0.3	1	0.4
	2.00	1	0.1	1	0.2	0	0.0	0	0.0
	1.50	2	0.2	1	0.2	0	0.0	1	0.4
	1.00	0	0.0	0	0.0	0	0.0	0	0.0
	Totals	1320	100.0	654	100.0	388	100.0	278	100.0
Subscale D: Pupil Participation	5.50-6.00	40	3.0	17	2.6	8	2.0	15	5.4
	5.00-5.50	95	7.2	46	7.0	23	5.9	27	9.6
	4.50-5.00	166	12.5	68	10.4	48	12.2	50	17.9
	4.00-4.50	256	19.3	128	19.5	74	18.9	53	18.9
	3.50-4.00	334	25.2	167	25.5	95	24.2	72	25.7
	3.00-3.50	224	16.9	115	17.6	69	17.6	39	13.9
	2.50-3.00	129	9.7	74	11.3	43	11.0	12	4.3
	2.00-2.50	50	3.8	24	3.7	21	5.4	6	2.1
	1.50-2.00	21	1.6	13	2.0	6	1.5	2	0.7
	1.00-1.50	12	0.9	3	0.5	5	1.3	4	1.4
	Totals	1327	100.0	655	100.0	392	100.0	280	100.0

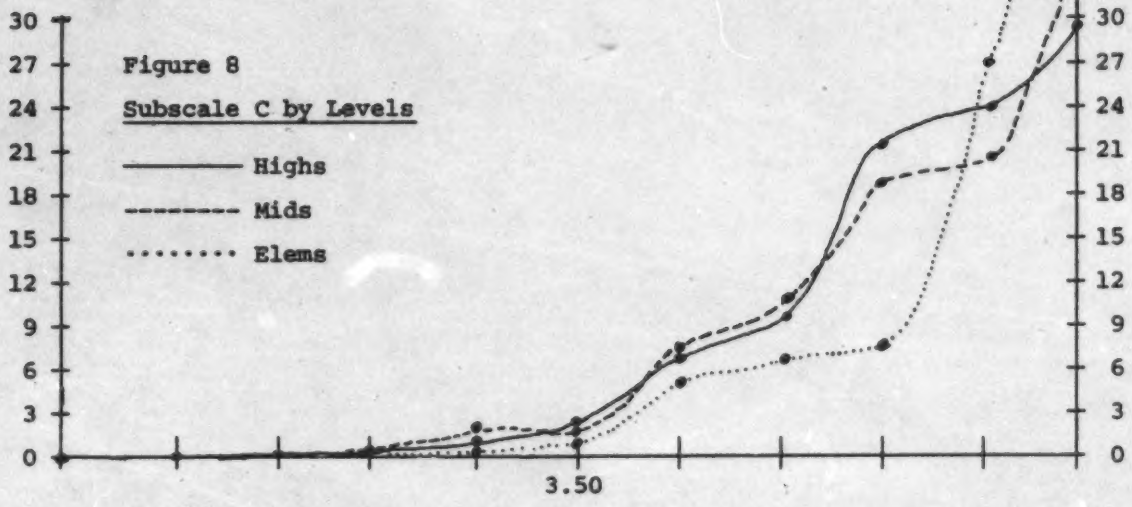
Figures 6-10

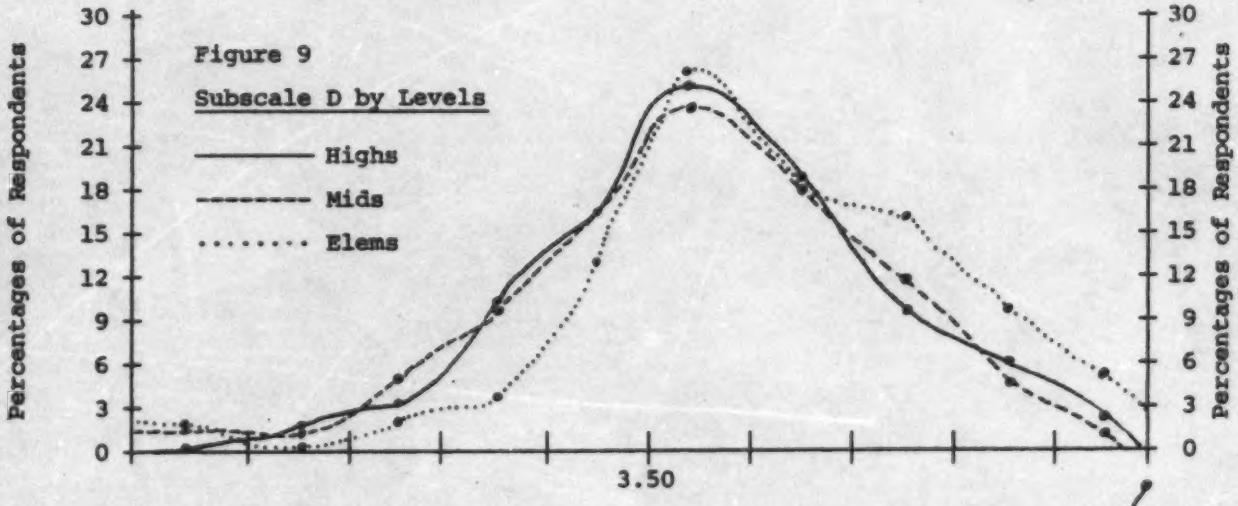
Four Subscales of Educational Beliefs:

Distributions of Subscale Scores Among Teachers



Figures 6-10 (Continued)





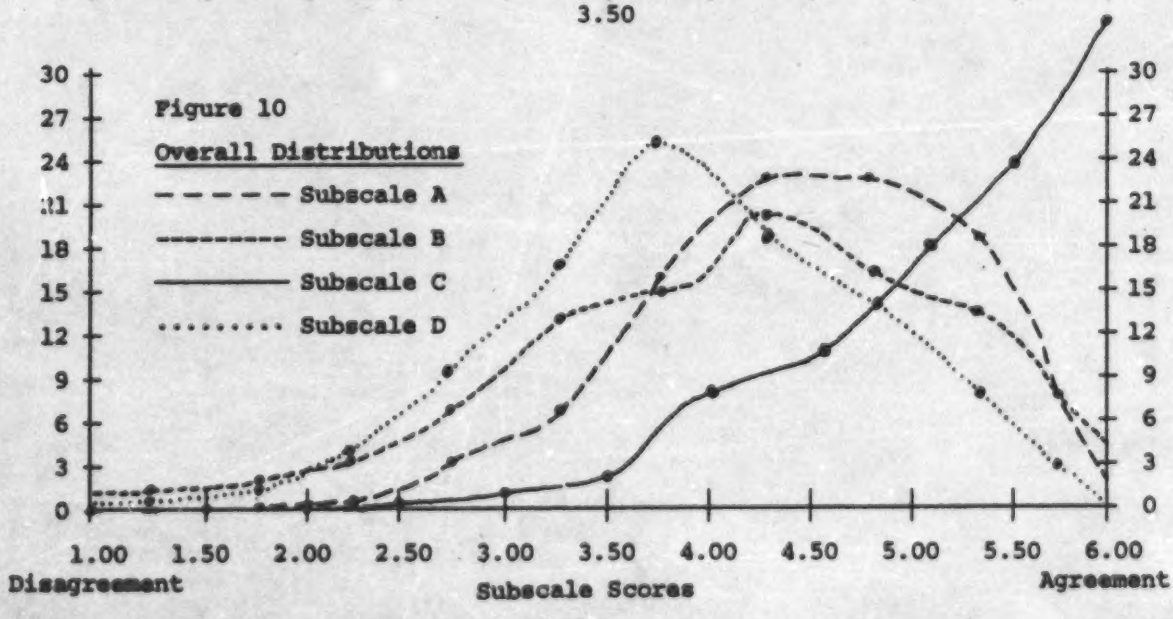


Table 7

Teacher Ed. Beliefs Subscales
High Schools

School	Teacher Control			Basics			Student Concern			Student Participation		
	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N
Vista	4.29	0.70	84	3.89	1.05	84	5.27	0.79	84	3.71	0.75	84
Crestview	4.28	0.82	44	3.73	1.08	44	5.27	0.68	43	3.79	0.88	44
Fairfield	4.70	0.87	44	4.32	0.96	44	5.06	0.82	44	3.60	0.98	44
Rosemont	4.38	0.91	110	4.14	1.22	110	5.14	0.81	109	3.84	0.82	110
Newport	4.27	0.92	76	4.13	1.15	76	5.32	0.76	77	3.95	1.02	76
Woodlake	4,26	0.62	53	4.11	0.96	53	5.26	0.71	53	3.72	0.76	53
Atwater	4.01	0.90	24	4.03	1.15	25	5.26	0.95	25	3.64	0.75	24
Palisades	4.48	0.79	58	4.07	1.12	58	5.22	0.83	58	4.00	0.85	58
Laurel	4.90	0.56	17	4.57	0.81	17	4.91	0.82	17	3.46	0.51	17
Manchester	4.50	0.80	66	4.24	1.14	66	5.05	0.80	66	3.78	1.03	66
Bradford	4.38	0.76	47	4.43	0.89	47	5.05	0.61	47	3.81	0.78	47
Euclid	4.33	0.72	22	4.05	0.94	22	5.00	1.07	21	3.69	0.63	22
Dennison	4.41	0.57	10	4.33	0.85	10	5.50	0.47	10	4.42	0.71	10
Overall	4.38	0.82	655	4,12	1,09	656	5.18	0,79	654	3,80	0,86	655

Table 8

Teacher Ed. Beliefs Subscales
Jr. High Schools

School	Teacher Control			Basics			Student Concern			Student Participation		
	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N
Vista	4.52	0.63	48	4.11	0.95	48	5.00	0.94	48	3.55	0.84	48
Crestview	4.70	0.74	32	4.15	1.03	32	5.02	0.79	32	3.59	0.76	32
Fairfield	4.74	0.70	34	4.28	1.16	34	4.94	0.79	34	3.54	0.73	34
Rosemont	4.66	0.67	41	4.28	1.01	41	5.32	0.56	41	3.92	0.99	41
Newport	4.50	0.68	57	3.87	1.04	56	5.33	0.80	54	3.82	0.87	57
Woodlake	4.39	0.57	27	3.92	1.12	27	5.30	0.68	27	3.46	0.74	27
Atwater	4.71	0.79	22	4.46	0.78	22	5.50	0.60	22	3.45	0.89	22
Palisades	4.43	0.78	40	4.14	0.95	40	5.44	0.79	40	4.45	0.71	40
Laurel	4.64	0.71	21	4.41	0.85	21	4.93	0.86	21	3.73	0.75	21
Manchester	4.82	0.70	32	4.43	1.24	32	5.45	0.68	31	3.89	0.92	32
Bradford	4.58	0.88	@&	3.90	0.92	27	5.28	0.82	27	3.53	1.12	27
Euclid	4.49	0.72	11	4.06	1.05	11	5.32	0.75	11	3.54	0.77	11
Overall	4.59	0.71	392	4.15	1.03	391	5.23	0.78	388	3.75	0.89	392

Table 9

Teacher Ed. Beliefs Subscales
Elementary Schools

School	Teacher Control			Basics			Student Concern			Student Participation		
	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N
Vista	4.36	0.73	30	3.73	1.25	30	5.36	0.79	29	3.98	0.83	30
Crestview	4.36	0.75	29	3.86	0.99	29	5.66	0.54	29	4.07	0.95	29
Fairfield	4.50	0.82	34	4.20	1.15	34	5.16	0.83	34	4.13	0.93	34
Rosemont	4.50	0.85	28	4.36	1.05	28	5.62	0.69	28	4.28	0.95	28
Newport	4.20	0.58	25	4.01	0.66	25	5.60	0.63	26	3.97	0.78	25
Woodlake	4.17	0.62	23	3.71	0.92	23	5.67	0.42	23	3.87	0.93	23
Atwater	4.72	0.87	12	4.76	1.21	11	5.32	0.78	11	3.98	0.82	12
Palisades	4.37	0.83	17	4.26	1.01	17	5.50	0.82	16	4.28	0.69	17
Laurel	4.55	0.99	23	4.07	1.15	23	5.44	0.73	23	4.64	0.61	23
Manchester	4.60	0.88	14	3.93	1.13	14	5.29	0.75	14	3.50	1.28	14
Bradford	4.19	1.00	20	3.97	1.06	20	5.58	0.61	20	4.05	0.82	20
Euclid	4.05	0.65	21	4.02	0.83	21	5.19	1.08	21	3.68	0.45	21
Dennison	4.18	1.02	4	3.83	1.00	4	5.75	0.50	4	4.90	0.58	4
Overall	4.37	0.80	280	4.04	1.05	279	5.46	0.74	278	4.07	0.88	280

Table 10

Teacher Ed. Beliefs Subscales

	Teacher Control			Basics			Student Concern			Student Participation		
	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N
Overall	4.44	0.79	1327	4.11	1.06	1326	5.25	0.78	1320	3.84	0.88	1327
Highs	4.38	0.82	655	4.12	1.09	656	5.18	0.79	654	3.80	0.86	655
Mids	4.59	0.71	392	4.15	1.03	391	5.23	0.78	388	3.75	0.89	392
Elems.	4.37	0.80	280	4.04	1.05	279	5.46	0.74	278	4.07	0.88	280

Figure 11

Mean Responses of Schools in Triples

Subscale A: Teacher Control

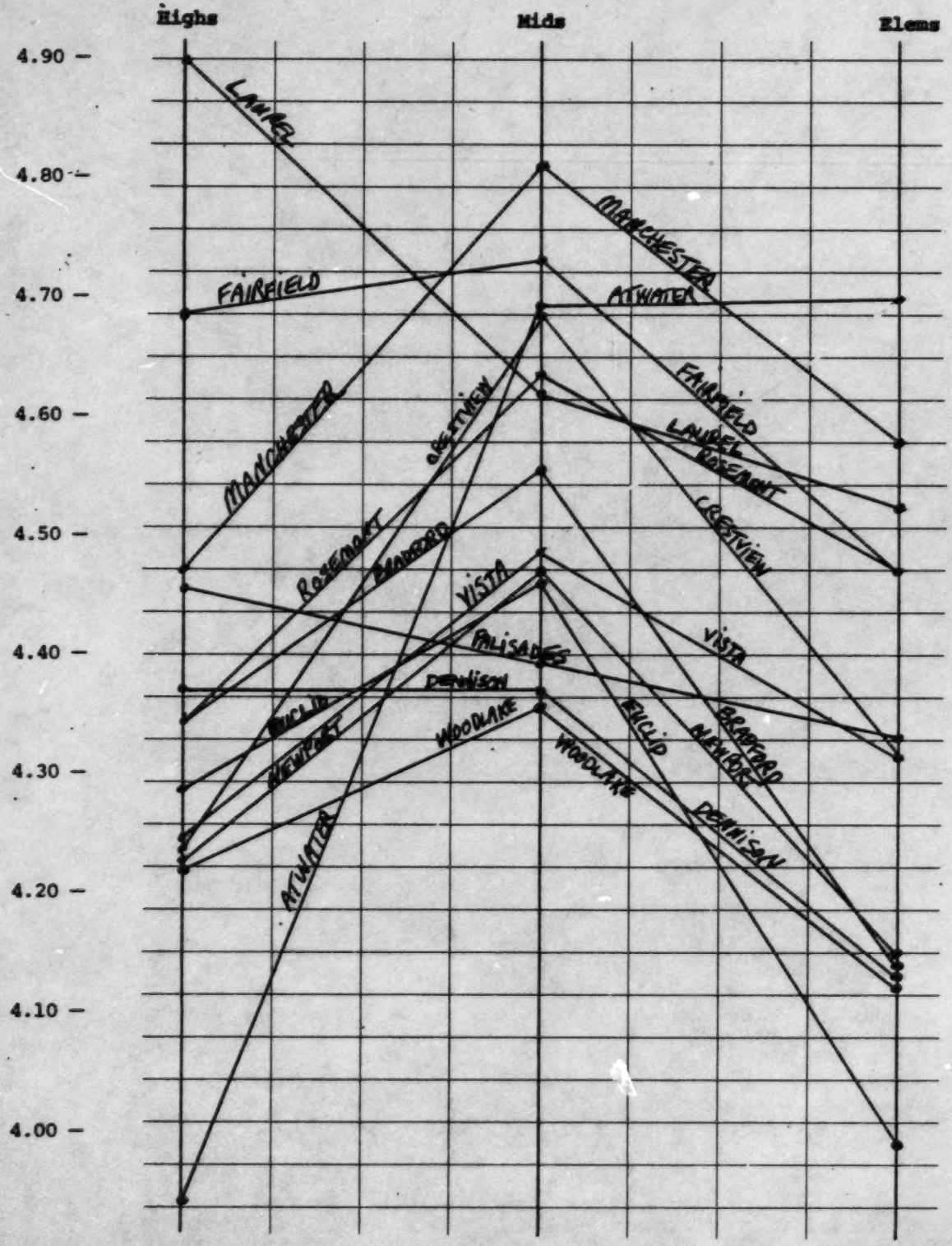


Figure 12

Mean Responses of Schools in Triples

Subscale B: Basic Skills

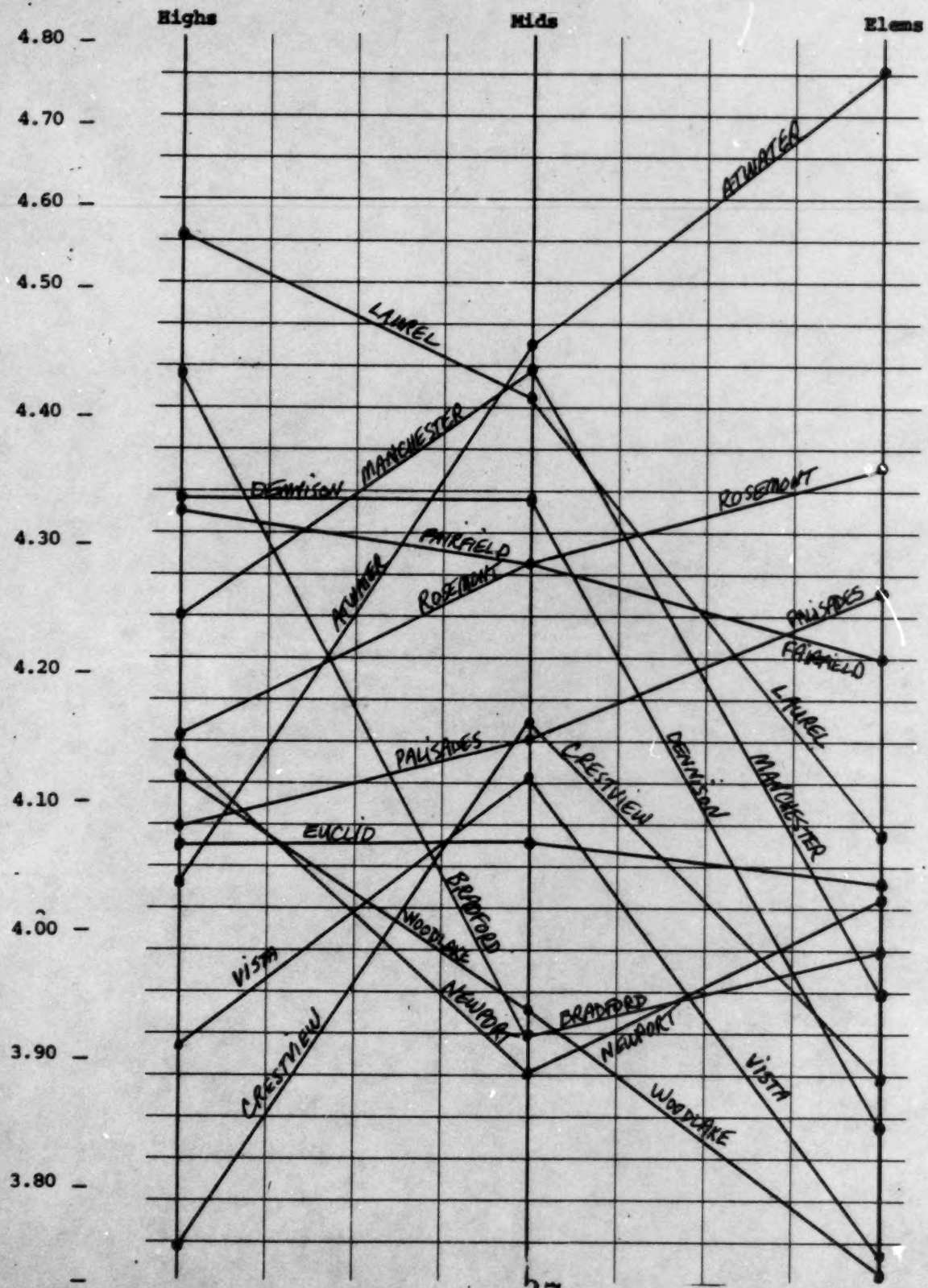


Figure 13

Mean Responses of Schools in Triples

Subscale C: Concern for Students

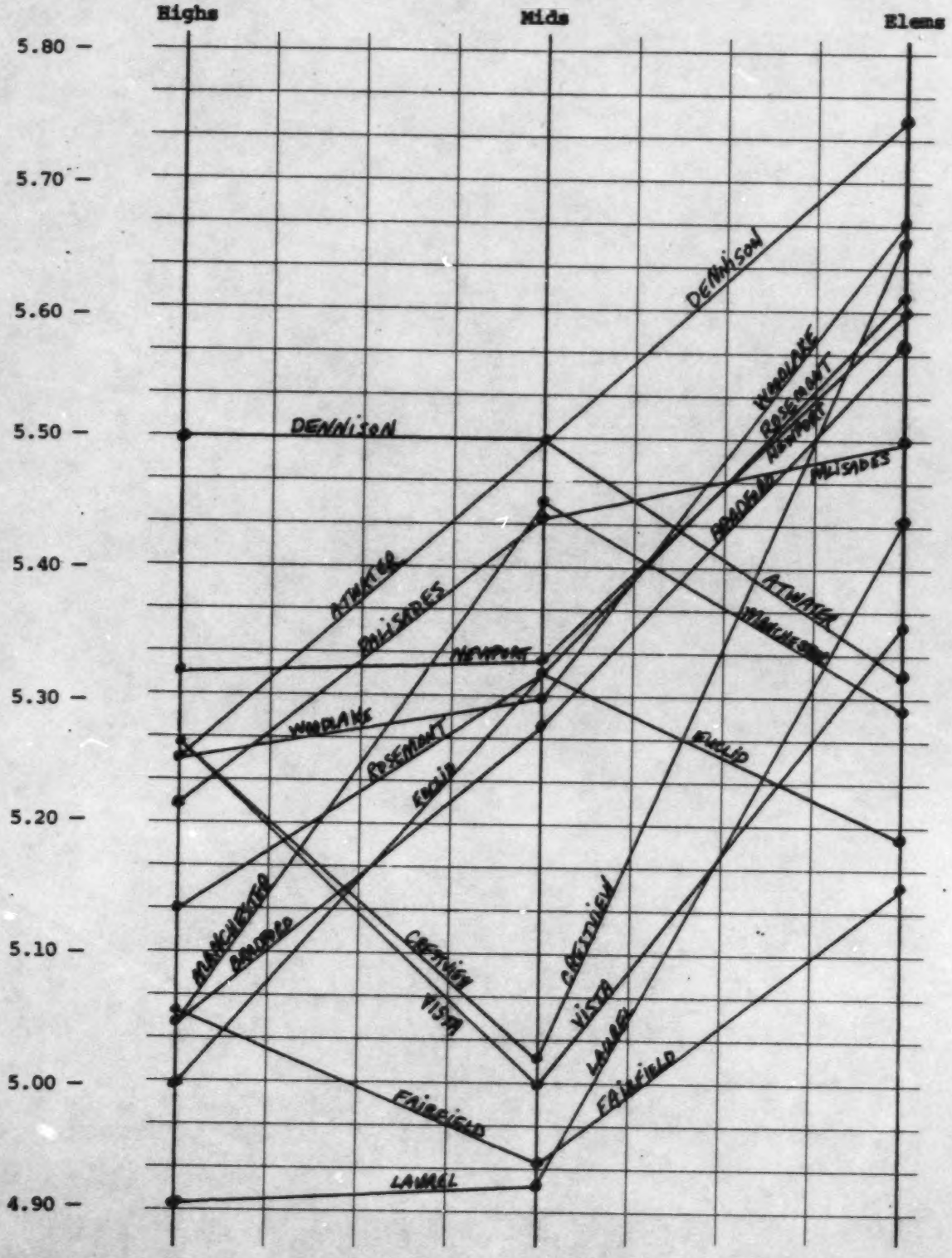


Figure 14

Mean Responses of Schools in Triples

Subscale D: Student Participation